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AUTHOR Marzano, Robert J.
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ABSTRACT

State-level policymakers, local-level administrators, and teachers alike are interested in how standards actually apply to classroom learning. This paper presents answers to questions that policymakers and educators should consider before implementing standards-based education at the local level. The following questions help sort through the practical issues of standards-based education: (1) From which sources should the standards be derived? (2) Who will set the standards? (3) What types of standards shall be written? (4) In what format should the standards be written? (5) At what levels will benchmarks be written? (6) How should benchmarks and standards be assessed? (7) How will student progress be reported? and (8) For what shall students be held accountable? (LMI)

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ROBERT J. MARZANO

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The Mid-continent Regional Educational Laboratory (McREL) is a nonprofit education organization specializing in applied educational R&D. Its principal areas of emphasis are curriculum, learning, and instruction. McREL conducts research and provides consulting services for local school districts and their schools, states, federal agencies, and private enterprises.

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2550 SOUTH PARKER ROAD · SUITE 500 · AURORA · COLORADO · 80014
VOICE: 303/337-0990 · FACSIMILE: 303/337-3005 · E-MAIL: info@mcrel.org

EIGHT QUESTIONS YOU SHOULD ASK BEFORE IMPLEMENTING STANDARDS-BASED EDUCATION AT THE LOCAL LEVEL

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Are you a policy maker at the state level charged with formulating, modifying or evaluating state-wide academic standards for K-12 education? Or, are you a school district administrator or teacher responsible for contributing to the design and implementation K-12 academic standards in your district? If you are any of these people, how standards actually apply to classroom learning, achievement and assessment probably matter greatly to you. If your perspective is statewide, you probably will want to ask how state standards affect classrooms in your local school districts. If you are a district educator, you probably will want to ask how your district can go about the task of establishing standards for its students. Accordingly, the following questions may help you sort through the practical issues of standards-based education.

1. WHERE WILL WE GET OUR STANDARDS?

OPTIONS:

A. Use the standards document produced by your state. Every state except one is in the process of developing or has developed state standards. Yet, a study conducted by the American Federation of Teachers (AFT) reports that only 13 of 49 state documents are specific enough to be used effectively by teachers. The majority of state documents describe standards at levels of generality that do not provide sufficient clarity for classroom instruction, nor are they precise enough to serve as an instrument of accountability. Even so, schools and districts wish to adopt valid standards, and parents want to know how their children are performing academically compared with standards.

B. Use the national standards documents such as the one published by the National Council of Teachers of Mathematics (NCTM) for mathematics, the one published by the National Research Council (NRC) for science, and the federally funded documents in other subject areas, which are now complete. Unfortunately, these documents commonly embed a description of requisite knowledge and skills within lengthy descriptions of performance activities, curriculum goals, instructional strategies, and the like. In order to glean what it is that *students* should know and be able to do would require the analysis of a veritable ocean of text--taken together, over 2000 pages and 14 pounds of documents. Clearly, this would not be an efficient use of time and resources.

C. Use studies that have attempted to synthesize the information in the national standards and state standards documents. For example, the Mid-continent Regional Educational Laboratory (McREL) has compiled and synthesized the standards and benchmarks found in 85 national and state level documents into a database containing 201 standards

organized into thirteen major categories: mathematics, science, history, language arts, geography, the arts, civics, economics, foreign language, health, physical education, behavioral studies and life skills. The McREL database is meant as a resource for schools and districts designing their own standards. Also, the Council for Basic Education (CBE) is currently in the process of developing a similar database.

RECOMMENDATION:

Use one of the inventory studies of national and state documents (i.e., McREL or CBE) to construct district level standards or to augment the standards identified in the current state document.

2. WHO WILL SET THE STANDARDS?

OPTIONS:

A. Assign subject area teachers to identify the standards in their areas of expertise. Unfortunately, experience reveals that subject area teachers working in isolation commonly will create standards that are very different from subject area to subject area. Often, they will use quite different formats for their standards and write their standards at very different levels of specificity--some very specific, some very general.

B. Ask committees of teachers and community members to set standards in various content areas. Frequently, community members do not have enough sophistication in technical subject areas such as mathematics and science. Additionally, some community members will volunteer to work on a standards committee but may have personal agendas that are antithetical to the standards movement.

RECOMMENDATION:

Organize a steering committee to guide the standards-setting efforts in the district. This committee should be highly knowledgeable about the technical aspects of standards. The committee should oversee the development of subject area standards which, in the first instance, would be drafted by subject area teachers. The steering committee should ensure that the standards produced by the subject area specialists are written at the same level of generality and employ the same format. The collective work produced by these specialists should be considered the first draft of the district's standards. This draft would be presented to a group that is comprised of educators and community members who are non-educators. They should make suggestions as to additions, deletions and changes to the first draft of the standards. Then, these additions, deletions and changes should be redrafted by the steering committee and its specialists to produce a second draft. The second draft would be presented to all teachers in the district or a representative sample of teachers for review and comment. This information will be used to create the third

draft of the document. The third draft then should be presented to the community at large. As many community members as possible should be involved in this review. Incorporating this feedback, the final draft of the standards and benchmarks then would be constructed.

3. WHAT TYPES OF STANDARDS SHALL WE INCLUDE?

OPTIONS:

A. Construct content standards in traditional subject areas such as mathematics, science, history, geography, language arts, fine arts, foreign languages and so on. These traditional subject areas would be the core of the curriculum. Historically, the basis for the standards movement at the national and local levels has been a description of essential knowledge and skills in the traditional subject areas. Often overlooked, however, is that these traditional subject areas include implicit standards in areas such as thinking, reasoning and work skills.

B. Establish standards in general reasoning skills, including the ability to make decisions, solve complex problems, make reasoned inductions and deductions and so on. These skills are commonly an implicit part of virtually every subject area anyway, but because they *are* implicit, they often are apt to remain hidden and obscure in the curriculum. Creating explicit standards in thinking and reasoning makes these skills explicit to teachers, students and parents.

C. Create standards that deal with general behavior in the world of work, such as managing e effectively, working well with others, managing resources and so on. Usually, these skills are valued by almost everyone and are addressed indirectly in each subject area. Creating specific standards in this area makes these skills and abilities explicit to teachers, students and parents.

RECOMMENDATION:

Establish subject area standards and general reasoning standards as the core of the curriculum. Work standards can be made explicit and addressed in classroom instruction but they should not carry the same weight as subject area and reasoning standards.

4. IN WHAT FORMAT WILL STANDARDS BE WRITTEN?

OPTIONS:

A. Draft standards and benchmarks as discrete elements of knowledge and skills. The advantage of this approach is that it gives teachers direction in terms of the specific

knowledge and skills they should address, yet offers them flexibility in how this knowledge is to be applied and how it is to be assessed. The risk of this approach is that teachers may tend to teach specific benchmarks as isolated fragments of information, rather than integrated parts of a whole body of knowledge.

B. Draft standards and benchmarks as specific performance activities or performance tasks. The advantage of this approach is that it gives teachers specific guidance for how students are to apply knowledge. The disadvantages of this approach are twofold: The system can be forcefully prescriptive in that the list of performance tasks or performance activities becomes a mandated set of activities in which teachers and students must engage; and, the subject area knowledge that a performance task or performance activity is intended to address is not always obvious.

RECOMMENDATION:

Write explicit standards and benchmarks as specific elements of knowledge and skills but include examples of performance tasks or performance activities for each benchmark within the standards documents. In this way, teachers are provided with guidance as to how students can be asked to apply their knowledge, but those knowledge application activities are not mandated by the standards documents themselves.

5. AT WHAT LEVELS WILL BENCHMARKS BE WRITTEN?

OPTIONS:

A. Write benchmarks at specified levels. Three common techniques are to write benchmarks at: a) three levels (e.g., K-5, 6-8, 9-12), b) four levels (e.g., K-2, 3-5, 6-8, 9-12) or c) five levels (e.g., K-2, 3-5, 6-8, 9-10, 11-12). The use of levels or intervals communicates a clear hierarchy of knowledge and skills. However, practically it implies that all assessment and reporting will be done at the upper end of each interval. For example, if three levels are used--option a) above--assessment of the benchmarks would be administered at grades 5, 8 and 12. However, this practice imposes an inordinate assessment and reporting demand on teachers and principals at those particular grade levels.

B. Write benchmarks for each grade level. This provides teachers with a great deal of 'itemized' guidance regarding a clear hierarchy of knowledge and skills that is grade level specific. However, this approach does not work well at the high school level where courses are the main organizational structure.

C. Write benchmarks as course descriptions at various grade levels. This approach works well at the high school level but does not clearly communicate a hierarchic structure of knowledge and skills at grade levels below high school.

RECOMMENDATION:

Write grade level benchmarks for grades K-8 and course descriptions for high school. (Make sure, however, that the high school course descriptions contain explicit standards.)

6. HOW SHOULD BENCHMARKS AND STANDARDS BE ASSESSED?

OPTIONS:

A. Use an externally developed test that employs traditional types of items. Here "external" means designed and administered outside of regular classroom instruction, and "traditional" means using a selected response format like multiple choice items. Although such tests are easily machine scored, they still take up a great deal of time. If a district or school wishes to assess standards in mathematics, science, history, reading and writing every year, this would mean that students would have to take a traditional test each year in each of these subject areas. This would require a great deal of testing outside of the regular classroom. Also, traditional selected response item formats usually do not require students to apply knowledge or demonstrate a deep understanding of the knowledge they are expected to learn.

B. Use an externally developed test that employs performance tasks. Performance tasks ask students to apply their knowledge in real-world scenarios. These tasks require students to 'construct' their own answers, as opposed to selecting from a set of pre-formed answers. Performance tasks allow for a better demonstration of students' understanding and application of knowledge and skills. A disadvantage of this approach is that it takes a long time to score these tasks since raters must make judgements as to the adequacy of students' responses. Additionally, it takes students a long time to complete these open-ended assessments; consequently, this approach also requires a great deal of testing outside the regular classroom.

C. Use assessment portfolios. The use of portfolios was once thought to be a viable way of having students demonstrate their knowledge in a variety of content areas in an economical and holistic manner. Experience has shown rather the opposite; the process of determining student knowledge and skills from portfolios is expensive and time consuming. And further, the research on the use of portfolios indicates that they are not capable of producing valid representations of, or generalizations about students' knowledge and skills within a given content area.

D. Use a variety of frequent assessment techniques in the classroom. With this approach, classroom teachers are responsible for assessing their students on standards and benchmarks. In this situation, teachers are free to use a variety of techniques including portfolios, performance tasks, traditional tests and informal observation. The advantage of this approach is that assessment of standards and benchmarks does not take away from

regular classroom instruction; rather, it is integrated into regular classroom routine. The risk with this approach is that, unless the classroom assessment regimen is designed and planned carefully, there is no guarantee that teacher assessments will be reliable and valid.

RECOMMENDATION:

Use a variety of frequent assessment techniques as part of regular classroom instruction. And also, use externally developed traditional tests and performance tests administered to a *sample* of students at selected grade levels. These external assessments then may be used to ensure that teacher assessments are reliable and valid. The external assessments also may be used to compare performance of students in the district to the performance of the students from the norming sample used to develop the test.

7. HOW WILL STUDENT PROGRESS BE REPORTED?

OPTIONS:

A. Report student progress on standards as a score on a test. This approach is straightforward and easily understood by parents. However, a single test score for a subject area cannot represent the breadth of standards within that content area.

B. Report student progress on standards as grades in courses. If the burden of assessing students' progress on standards is to be shouldered by classroom teachers, then grades in courses can represent progress on standards. The problem with this approach is that a single grade, like a single score on a test, cannot reflect the many possible profiles of achievement on multiple standards. One way of alleviating this problem is to establish a specific algorithm for converting performance on multiple standards to a single grade. For example, a grade of A would indicate superior performance on all standards addressed in the course; a grade of B would indicate superior performance on most standards but not all, and so on.

C. Report student progress on each standard using a rubric that describes various levels of knowledge and skills. The advantage of this approach is that it provides students, teachers and parents alike with highly specific information. The disadvantage is that it is a very different way of reporting progress compared with traditional grading. Even though rubric reporting by standard is a much more informative system than the traditional one, it might cause a negative reaction among parents who are used to seeing grading they way it was reported for them. Needless to say, extensive, prior communication with parents should be accomplished before implementing this approach to reporting on student progress.

RECOMMENDATION:

Continue to give traditional grades in all courses. This will provide parents with a sense that the system as they knew it is still functioning. However, in addition to traditional grading, report student progress on the numerous standards covered in each course using a rubric that describes levels of performance for that course. This will provide students and parents with highly specific and useful information about student performance on standards in each course.

8. WHAT WILL WE HOLD STUDENTS ACCOUNTABLE FOR?

OPTIONS:

A. Do not hold students accountable for specific levels of performance on any standards. This is the system we currently have in place. In virtually every state, the only standard students must meet to graduate is that they obtain a certain number of "credits," and a credit is earned by obtaining at least a "D" in a course. The advantage of this approach is that it is very easy to earn a high school diploma. The disadvantage of this approach is that students can graduate without acquiring any specific skills and abilities, such as the abilities to read, write and compute.

B. Hold students accountable for all standards across all major subject areas: reading, writing, mathematics, science, history, geography and so on. The advantage of this approach is that it establishes high expectations for all students in all major content areas. The disadvantage of this approach is that it is such a radical change from current practice that many students who currently graduate would not graduate if they were required to meet high standards in a variety of subject areas.

C. Hold students accountable for selected standards in selected content areas considered "basic" by educators and the general public (e.g., reading, writing and mathematics). The advantage of this approach is that it establishes expectations for all students but only in those content areas that are considered truly essential. Even this increase in expectations probably will lessen the number of students who graduate, but the decline in numbers will not be as drastic as it would be if high expectations were established in all major subject areas. The danger of this approach is the expectations will devolve into a set of minimum competencies which do not challenge students.

RECOMMENDATIONS:

Hold students accountable for standards in those content areas considered 'basic' by diverse stakeholders in a particular school district. Articulate standards in other areas not

considered basic, and report students' standing relative to those standards. Consider this dual approach an interim step, leading eventually to student and teacher accountability for attainment of content knowledge and performance levels embedded in a common set of consensus standards.

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